


The Applicants' will discuss the amendments to the claims below under the heading "Claim Rejections".

Information Disclosure Statement

The Office Action states that the Applicants' information disclosure statement filed December 12, 2000 has not been considered. The Office Action also encloses, however, copies of Form PTO-1449 on which many references are initialed as having been considered. The Applicants assume that only the lined-through references were not considered. The Applicants request that the Examiner inform them if this assumption is not correct. The Applicants are filing a new information disclosure statement containing lined-through references and two references recently cited in Application No. 09/425,235.

Double Patenting

The Office Action provisionally rejected claims 1-18 and 27-31 on the basis of double patenting in view of Application No. 09/425,235. As this was a provisional rejection, the Applicants reserve their right to traverse this rejection of file a terminal disclaimer when the '235 Application issues to patent. Further, the Examiner only provided a reason for provisionally rejecting claim 1. The second last sentence of paragraph 5 states, "The balance of the claims are obvious in view of AAPA and/or the Class 210, subclass 412 definition for the reasons advanced below." No reasons were advanced below. The Applicants request that the Examiner provide the missing reasons if the Examiner intends to maintain the provisional rejection against any claims other than claim 1.



Claim Rejections

The Applicants submit that the amendments to the claims and new claims do not add any new subject matter. The amendments to the claims are supported by the disclosure as follows:


Claim 1: (1) "stable permeability" at page 19, lines 24-25 and page 20, lines 16-20, (2) "reduce the rate of decline in permeability" at page 9, lines 1-3 and page 12, lines 12-13.

Claim 27: (1) "performing recovery cleanings of the membranes from time to time, the recovery cleanings being at least 15 days apart from each other" and "between recovery cleanings, performing ..." at page 9, lines 1-3 and page 12, lines 11-15.

Claim 32: - page 12, line 14.

Claim 33: - page 12, lines 17-20.

The Office Action rejected claims 1-4 and 27-31 as being indefinite because of the recitations "acceptable" and "gradual". The Applicants submit that the recitation "acceptable" in the context of the claims is sufficiently clear to a person skilled in the art since acceptable permeabilities are known for membrane systems. Further, the exact quantity of the acceptable permeability was not an element of the claim but rather the selection to maintain a permeability. Similarly, no specific rate of decline was required by the word "gradual" but rather the selection to produce a rate of decline. Both recitations are in contrast to prior art which teaches methods of substantially restoring membrane permeability. Nevertheless, the wording of claim 1 has been amended to use other words. Claim 27 is amended to recite that recovery cleanings and cleanings according



to part (B) of claim 27 are parts of a method combining both of those types of cleanings. New claim 33 further describes the relationship between recovery cleanings and cleanings according to part (B) of claim 27.

The Applicants submit that claims 1-4 and 27-31 are not indefinite. The only other objection to these claims in the Office Action is a provisional double patenting rejection in relation to 09/425,235. Similarly, the only rejection of claims 5-18 is the provisional double patenting rejection. Since a provisional rejection alone is insufficient grounds to withhold an allowance, the Applicants request that this application be allowed.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

Respectfully submitted,

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Appl. No. 09/444,414

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

1. (twice amended) A method for cleaning one or more membranes normally immersed in water containing solids and used to produce a filtered permeate comprising:

performing at least once a week the steps of:

(a) stopping permeation;


(b) flowing a selected concentration of a chemical cleaner through the membranes in a direction opposite to the direction in which permeate normally passes through the membranes to provide chemical cleaner in an area in or adjacent the membranes for a selected duration; and,

(c) resuming permeation,

wherein

(d) the sum of the products of the concentrations of the chemical cleaner expressed as an equivalent concentration of NaOCl in cleaning efficacy and the durations of all of the steps of flowing a selected concentration of a chemical cleaner through the membranes in a direction opposite to the direction in which permeate normally passes through the membranes to provide chemical cleaner in an area in or adjacent the membranes for a selected duration in a week is between 2,000 minutes•mg/L and 30,000 minutes•mg/L; and,

(e) wherein the selected concentration, selected duration and sum of the products are selected to maintain [an acceptable] a stable permeability or [produce a gradual] reduce the rate of decline in permeability of the membranes over extended periods of time.



27. (amended) A method for cleaning one or more membranes normally immersed in water containing solids and used to produce a filtered permeate comprising:

(A) performing recovery cleanings of the membranes from time to time, the recovery cleanings being at least 15 days apart from each other; and,

(B) between recovery cleanings, performing at least once a week the steps of:

(a) stopping permeation;

(b) flowing a selected concentration of a chemical cleaner through the membranes in a direction opposite to the direction in which permeate normally passes through the membranes to provide chemical cleaner in an area in or adjacent the membranes for a selected duration; and,

(c) resuming permeation,

wherein

(d) the selected concentration of chemical cleaner is between about 20 mg/L and about 200 mg/L of chemical cleaner expressed as an equivalent concentration of NaOCl in cleaning efficacy;

(e) the selected duration is between about 10 minutes and about 100 minutes; and,

(f) the sum of the products of the concentrations of the chemical cleaner expressed as an equivalent concentration of NaOCl in cleaning efficacy and the durations of all of the steps of flowing a selected concentration of a chemical cleaner through the membranes in a direction opposite to the direction in which permeate normally passes through the membranes to provide chemical cleaner in an area in or adjacent the membranes for a selected duration in a week is between 2,000 minutes•mg/L and 30,000 minutes•mg/L [and maintains an acceptable permeability or gradual decline in permeability over extended periods of time].

32. (new) The method of claim 1 wherein the extended periods of time are at least 15 days in length.

33. (new) The method of claim 27 wherein the decrease in the permeability of the membranes between performances of steps (a), (b) and (c) is at least as great as any increase in the permeability of the membranes after a performance of steps (a), (b) and (c).
